REMARKS

With this amendment, Claims 1-14 are amended. Claims 1-14 are thus presented for further Examination.

The specific changes to the specification and the amended claims are shown on a separate set of pages attached hereto and entitled VERSION WITH MARKINGS TO SHOW CHANGES MADE, which follows the signature page of this Amendment. On this set of pages, the insertions are underlined while the ~~deletions are stricken through~~.

Drawing Objections

A proposed drawing correction is submitted herewith. The change consists of the addition of descriptors "A" and "B" to Figures 1 and 2. Applicants will file formal drawings upon approval of the drawing correction.

Claim Objections

Claims 1-14 have been amended according to the Examiner's suggestions.

Rejections Under 35 U.S.C. § 112

The Examiner has rejected Claim 14 under 35 U.S.C. § 112, second paragraph as failing to particularly point out and distinctly claim what is regarded as the invention.

Claim 14 has been amended to recite that the inner surface of the arc-shaped segments are "configured to substantially follow the outer contour of a set of inner cable strands." It is therefore respectfully submitted that Claim 14 is in condition for allowance.

Provisional Non-Statutory Double Patenting Rejection

Since the above amendments and remarks render the present application in condition for allowance, the applicants respectfully request that in accordance with M.P.E.P. 804(I)(B), the provisional double patenting rejection be withdrawn because Application No. 09/727,070 has not

yet issued. Should a double patenting rejection be made in Application No. 09/727,070, Applicants will consider filing a terminal disclaimer in that application.

CONCLUSION

The applicant has endeavored to address all of the Examiner's concerns as expressed in the outstanding Office Action. Accordingly, amendments to the claims, the reasons therefor, and arguments in support of the patentability of the pending claim set are presented above. It is submitted that the amendments above do not narrow the claims. In light of these amendments and remarks, reconsideration and withdrawal of the outstanding rejections is respectfully requested.

Any claim amendments which are not specifically discussed in the above remarks are not made for patentability purposes, do not narrow the claims, and it is believed that the claims would satisfy the statutory requirements for patentability without the entry of such amendments. Rather, these amendments have only been made to increase claim readability, to improve grammar, and to reduce the time and effort required of those in the art to clearly understand the scope of the claim language.

If the Examiner has any questions which may be answered by telephone, he is invited to call the undersigned directly.

Please charge any additional fees, including any fees for additional extension of time, or credit overpayment to Deposit Account No. 11-1410.

Respectfully submitted,

KNOBBE, MARTENS, OLSON & BEAR, LLP

Dated: 8/27/02

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VERSION WITH MARKINGS TO SHOW CHANGES MADE

Claims 1-14 have been amended as follows:

1. (Amended) An overhead cable wherein a sectional shape of an outer circumferential surface formed by outermost members is a polygon inscribing a circle of a diameter d ~~(mm)~~, sides of the polygon are formed as substantially flat surfaces connecting adjoining vertexes, vertexes of the polygon inscribing the circle are cut away to form arc-shaped grooves having a radius R ~~(mm)~~ and having a depth H ~~(mm)~~ from the vertexes, and the arc-shaped grooves are formed in spirals in the outer circumference of the overhead cable in a longitudinal direction of the overhead cable at predetermined pitches,

the diameter d of the overhead cable being in a range of 18 to 52 ~~(mm)~~, and

the outer circumferential surface formed by the outermost members being formed so that a number N of vertexes of the polygon and the diameter d satisfy a condition defined by the following formula 1:

$$N=(13.0+0.092d+0.0031d^2) \text{ rounded off} \quad (1)$$

the depth H of ~~an~~ each arc-shaped groove and the diameter d satisfy a condition defined by the following formula 2:

$$0.00543d \leq H \leq 0.00865d \quad (2)$$

and

the radius R of ~~an~~ each arc-shaped groove and the depth H satisfy a condition defined by the following formula 3:

$$4.960H \leq R \leq 8.802H \quad (3)$$

2. (Amended) An overhead cable as set forth in claim 1, wherein the outer circumferential surface formed by the outermost members being formed so that

the depth H of ~~an~~ each arc-shaped groove of the polygon and the diameter d satisfy a condition defined by the following formula 2-1:

$$0.00656d \leq H \leq 0.00773d \quad (2\text{-}1)$$

3. (Amended) An overhead cable as set forth in claim 1, wherein the outer circumferential surface formed by the outermost members being formed so that

the radius R of ~~an~~ each arc-shaped groove and the depth H satisfy a condition defined by the following formula 3-1a:

$$5.834H \leq R \leq 7.082H \qquad (3\text{-}1a)$$

4. (Amended) An overhead cable as set forth in claim 2, wherein the outer circumferential surface formed by the outermost members being formed so that

the radius R of ~~an~~ each arc-shaped groove and the depth H satisfy a condition defined by the following formula 3-1b:

$$5.834H \leq R \leq 7.082H \qquad (3\text{-}1b)$$

5. (Amended) An overhead cable as set forth in claim 1, wherein the outer circumferential surface formed by the outermost members being formed so that

the depth H of ~~an~~ each arc-shaped groove of the polygon and the diameter d satisfy a condition defined by the following formula 2-2a:

$$H=0.00721d \qquad (2\text{-}2a)$$

6. (Amended) An overhead cable as set forth in claim 3, wherein the outer circumferential surface formed by the outermost members being formed so that

the depth H of ~~an~~ each arc-shaped groove of the polygon and the diameter d satisfy a condition defined by the following formula 2-2b:

$$H=0.00721d \qquad (2\text{-}2b)$$

7. (Amended) An overhead cable as set forth in claim 4, wherein the outer circumferential surface formed by the outermost members being formed so that

the depth H of ~~an~~ each arc-shaped groove of the polygon and the diameter d satisfy a condition defined by the following formula 2-2c:

$$H=0.00721d \qquad (2\text{-}2c)$$

8. (Amended) An overhead cable as set forth in claim 1, wherein the outer circumferential surface formed by the outermost members being formed so that

the radius R of ~~an~~ each arc-shaped groove and the depth H satisfy a condition defined by the following formula 3-2a:

$$R=6.71H \qquad (3\text{-}2a)$$

9. (Amended) An overhead cable as set forth in claim 2, wherein the outer circumferential surface formed by the outermost members being formed so that

the radius R of ~~an~~ each arc-shaped groove and the depth H satisfy a condition defined by the following formula 3-2b:

$$R=6.71H \qquad (3\text{-}2b)$$

10. (Amended) An overhead cable as set forth in claim 3, wherein the outer circumferential surface formed by the outermost members being formed so that

the radius R of ~~an~~ each arc-shaped groove and the depth H satisfy a condition defined by the following formula 3-2c:

$$R=6.71H \qquad (3\text{-}2c)$$

11. (Amended) An overhead cable as set forth in claim 5, wherein the outer circumferential surface formed by the outermost members being formed so that

the radius R of ~~an~~ each arc-shaped groove and the depth H satisfy a condition defined by the following formula 3-2d:

$$R=6.71H \qquad (3\text{-}2d)$$

12. (Amended) An overhead cable as set forth in claim 6, wherein the outer circumferential surface formed by the outermost members being formed so that

the radius R of ~~an~~ each arc-shaped groove and the depth H satisfy a condition defined by the following formula 3-2e:

$$R=6.71H \qquad (3\text{-}2e)$$

13. (Amended) An overhead cable as set forth in claim 7, wherein the outer circumferential surface formed by the outermost members being formed so that

the radius R of ~~an~~ each arc-shaped groove and the depth H satisfy a condition defined by the following formula 3-2f:

$$R=6.71H \qquad (3\text{-}2f)$$

14. (Amended) An overhead cable as set forth in claim 1, wherein

the outermost members are comprised of a plurality of segments,

wherein each segment is obtained by dividing the polygon at the vertexes, wherein each segment has an inner surface having a partially arc-shaped sectional shape ~~of a~~

~~radius d1 (mm) (d1<d)~~ configured to substantially follow the outer contour of a set of inner cable strands, and wherein each segment has an outer surface having a flat sectional shape connecting the adjoining vertexes, and wherein each segment has two corners of the flat outer surface formed to define ~~a~~ said arc-shaped groove of a radius R and depth H together with the corners of the adjoining segments, and

wherein the plurality of segments are arranged so that they adjoin each other so the corners of the adjoining segments form said arc-shaped grooves and ~~to~~ cover the outer circumference of the members positioned inside them and so that the plurality of arc-shaped grooves circle the overhead cable in spirals in the longitudinal direction at a predetermined pitch.

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